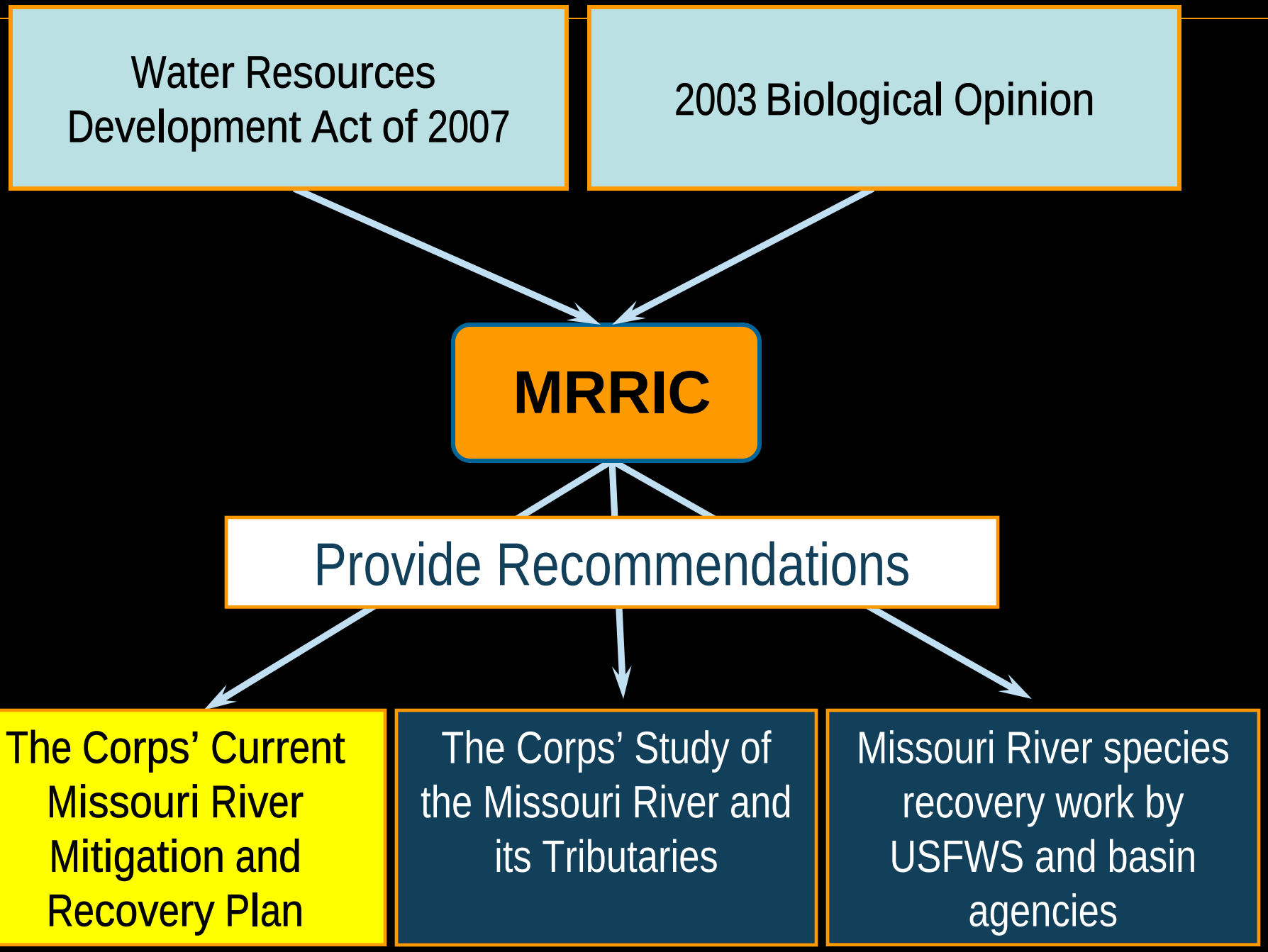
Water Resources Development Act of 2007
2003 Biological Opinion
MRRIC
Provide Recommendations
The Corps' Current Missouri River Mitigation and Recovery Plan
The Corps' Study of the Missouri River and its Tributaries
Missouri River species recovery work by USFWS and basin agencies

# Missouri River

## Recovery Program

*Photo Credit: NEBRASKAland Magazine/Nebraska Game and Parks Commission*

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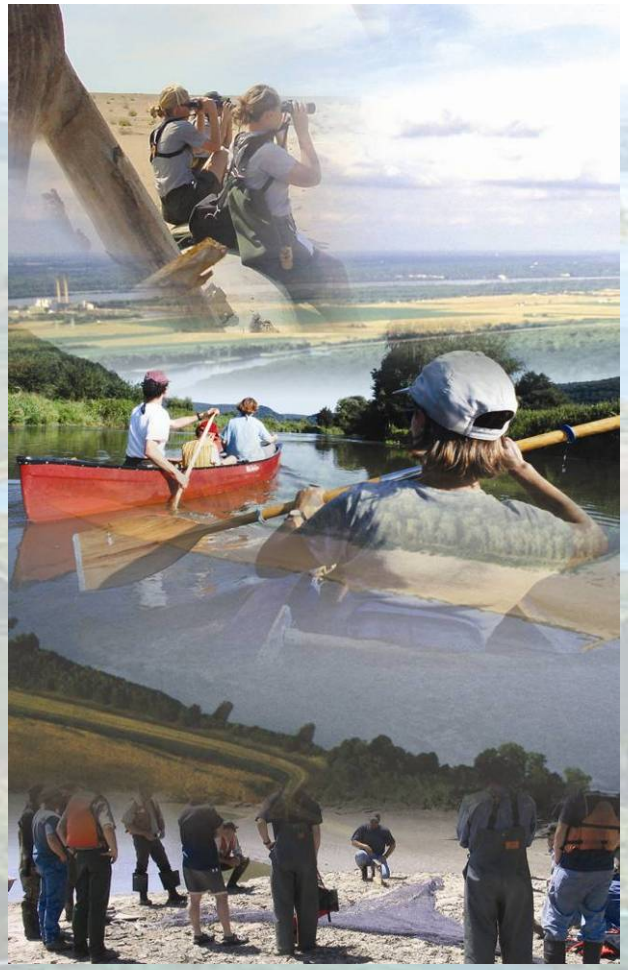
# Vision



A sustainable ecosystem supporting thriving populations of native species while providing for current social and economic values.

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# Mission

Implement actions to accomplish Missouri River ecosystem recovery goals in coordination and collaboration with agency partners and stakeholders.

***"There are not many rivers, one for each of us, but only this one river, and if we all want to stay here, in some kind of relation to the river, then we have to learn, somehow, to live together."***

***Daniel Kemmis***

***Community and the Politics of Place, 1990.***

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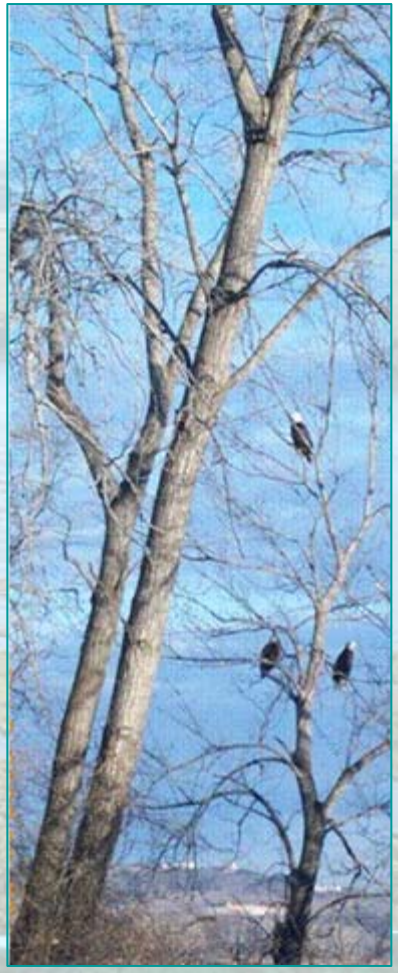
# Key Authorities and Mandates

- Flood Control Act of 1944
  - Master Water Control Manual
- Endangered Species Act
  - 2003 Amended Biological Opinion
- WRDA 1986, 1999, 2007

# Impacts on Missouri River Ecosystem

- 3 million acres of natural river habitat altered
- 51 of 67 native species now rated uncommon or decreasing
- Reproduction of cottonwood, historically dominant floodplain tree, has dramatically declined
- Aquatic insects, a key link on food chain, reduced by 70 percent



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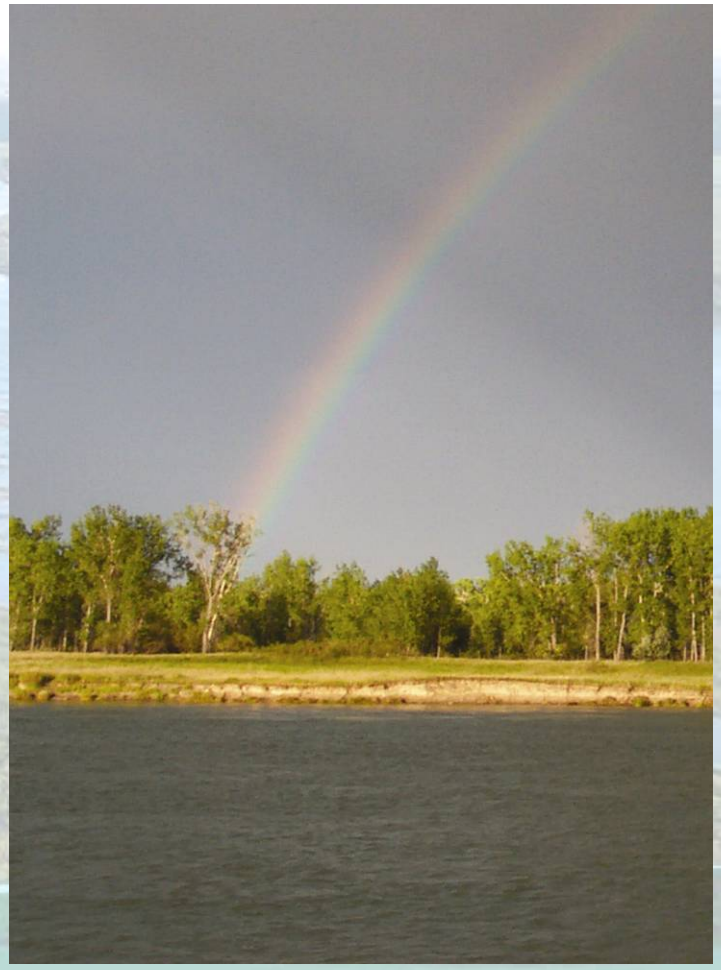
# Key Recovery Elements

- Habitat Creation
  - Shallow Water
  - Emergent Sandbar
  - Floodplain Restoration
- Hatchery Support
- Flow Modification
- Science Program
- Adaptive Management
- Public Involvement



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# Habitat Creation

GOAL

Provide habitat for native fish and wildlife by restoring natural features and functions. Includes shallow water and sandbar habitat creation, cottonwood habitat and wetland restoration.

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# Habitat Creation

The SHALLOW WATER HABITAT PROGRAM

- Creating 20 - 30 acres per mile of shallow water habitat by 2020
- Restoring river width and diversity
- Restoring chutes, backwaters, and side channels

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# Habitat Creation

The SHALLOW WATER HABITAT PROGRAM

- 2010 acreage goal: 5,870 acres
- 2015 acreage goal: 11,739 acres
- 2020 acreage goal: 19,565 acres
- On target with BiOp through 2007

# Habitat Creation

The EMERGENT SANDBAR HABITAT PROGRAM

- Mechanically building and maintaining sandbars
- Clearing existing sandbars of vegetation
- Continue to use flows within constraints of the Master Manual
- Investigate potential reservoir habitat

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# Habitat Creation

## Floodplain Restoration

- Map, evaluate, and restore cottonwood forests
- Create wetlands
- Reconnect floodplains
- Restore native vegetation

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# Hatchery Support

Raising pallid sturgeon in hatcheries and stocking them in the river are temporary solutions that help recovery while habitat is being restored.

# Hatchery Support

- Hatchery capacity increased significantly
- Initial stocked fish now being used as brood fish
- Stocked fish provide an important tool for evaluating spring pulse and habitat creation actions
- Excess hatchery production used in research and education

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# Flow Modification

## GOAL

Implement a more natural flow regime to benefit native fish and wildlife while seeking balance with social, economic, and cultural resources.

# Flow Modification

The SPRING PULSE PROGRAM

- Stored water is released from Gavins Point Dam during March and May to mimic natural spring river rise
- Goals:
  - Evaluate sediment movement
  - Contribute to pallid sturgeon reproduction/recruitment
- Dependent on storage/runoff

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# Science

GOAL

Ensure that management decisions are based on the best available science.

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# Science

- Research
- Monitoring
- Evaluation
- Independent review
- Education/outreach

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# Adaptive Management

- More informed decisions
- Reduces uncertainty
- Improves public involvement
- Provides transparency

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# Public Involvement

## GOAL

Establish collaborative stakeholder processes, such as MRRIC, and educational opportunities to provide insight and recommendations on recovery activities.

# Engagement Opportunities for MRRIC

- MRRP
  - Budget
  - Annual work plan
  - Science
  - Adaptive management
- MRERP
  - Comprehensive planning
- Water Management
  - AOP process
- U.S. Fish & Wildlife Service and other agencies' recovery efforts
  - Species recovery plans

# Missouri River Recovery Program
# Corps Team

- Program Manager – Mike George
- Implementation
  - Chance Bitner (Kansas City)
  - Teresa Reinig (Omaha)
- Integrated Science – Casey Kruse
- MRRIC Coordination – TBD
- MRERP Co-Leads
  - Jennifer Switzer
  - Randy Sellers
- Water Management – Mary Roth

# Missouri River Recovery Program
# FWS Team

- Coordinator – Mike Olson
- Least Tern / Lower Basin Lead – Jane Ledwin
- Pallid Sturgeon Lead – George Jordan
- Piping Plover – ESH Lead – Carol Aron
- Integrated Science – Wayne Nelson-Stastny
- MRRIC – Carol Hale
- MRERP Co-Leads
  - Carol Hale
  - Wayne Nelson-Stastny

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U.S. FISH & WILDLIFE SERVICE

http://www.moriverrecovery.org

MISSOURI RIVER RECOVERY PROGRAM